

COVER PAGE FOR TEST REPORT

Product Category:	Information Technology Equipment Including Electrical Business Equipment
Product Category CCN:	NWGQ, NWGQ7
Test Procedure:	Listing
Product:	19" Panel PC
Model/Type Reference:	W19B89T-XXXX (X can be 0-9, A-Z or blank)
Rating(s):	12Vdc, 9.17A
Standards:	UL 60950-1, 1st Edition, 2006-07-07 (Information Technology Equipment - Safety - Part 1: General Requirements) CSA C22.2 No. 60950-1-03, 1st Edition, 2006-07 (Information Technology Equipment - Safety - Part 1: General Requirements)
Applicant Name and Address:	WINMATE COMMUNICATION INC 9TH FL 111-6 HSING TE RD SUN CHUNG TAIPEI HSIEN 241 TAIWAN
This Report includes the following parts, in addition to this cover page: <ol style="list-style-type: none">1. Specific Inspection Criteria2. Specific Technical Criteria3. Clause Verdicts4. Critical Components5. Test Results6. National Differences7. Enclosures	

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of Underwriters Laboratories Inc. ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

Test Report By:



Kevin Hsu
Associate Project Engineer
Underwriters Laboratories Taiwan Co., Ltd.

Reviewed By:



Stephen Ho
Project Engineer
Underwriters Laboratories Taiwan Co., Ltd.

Issue Date: 2007-07-09

Page 1 of 2

Report Reference #

E213998-A12-UL-1

Enclosure

Test Record

Description
Test Record 1
CRD
Datasheets

Test Record No. 1

--The manufacturer submitted representative production sample of 19" Panel PC, Model W19B89T-XXXX (X can be 0-9, A-Z or blank) --The results of this investigation indicate that the products evaluated comply with the applicable requirements in the U.S. and Canadian (Bi-National) Standard for Safety of Information Technology Equipment-Part 1, Including Electrical Business Equipment, CAN/CSA-C22.2 No. 60950-1-03 * UL 60950-1 1st Edition, dated April 01, 2003, including revisions through revision date July 7, 2006. --Unless otherwise noted in the above list of tests, all tests were conducted by Universal Standard Service Inc, located at Lin Kou Shiang, Taipei Hsien, Taiwan, under the CAP program. --Tests noted by the initials "UL" were witnessed by UL staff member. --Test results reported relate only to the items tested.

The following tests were conducted:

Test	Testing Location/Comments
End Product Reference Page	
General Guidelines	
Input: Single-Phase (1.6.2)	
Limited Current Circuit Measurement (2.4.1, 2.4.2)	"UL"
Limited Power Source Measurements (2.5)	
Loading (4.2.10)	
Lithium Battery Reverse Current Measurement (4.3.8)	"UL"
Heating (4.5.1, 1.4.12, 1.4.13)	
Abnormal Operation (5.3.1 - 5.3.8.2)	
Overload of Operator Accessible Connector (5.3.6)	"UL"


Test results are valid only for the tested equipment. These tests are considered representative of the products covered by this Test Report. The test methods and results of the above tests have been reviewed and found to be in accordance with the requirements in the Standard(s) referenced at the beginning of this Test Report.

Project: 07CA25154File: E213998

Page 1 of 1

Compliance Review
Conducted by:

Kevin Hsu



2007/7/8

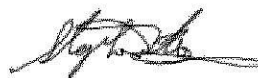
Printed Name

Signature

Date

CONSTRUCTION COMPLIANCE REVIEW RECORDCompleted Construction
Compliance Review was
Reviewed and accepted by:

Stephen Ho



2007/7/9

(Qualified Reviewer) Printed Name

Signature

Date

SAMPLE IDENTIFICATION:

Sample Card #	Date Received	Sample #	Manufacturer, Product Identification and Ratings
See Datasheet			

MEASUREMENT INSTRUMENT INFORMATION: (Ex. Micrometer, Calipers, Comparator)

Inst. ID #	Instrument Type	Function/Range	Last Cal. Date	Next Cal. Date
See Datasheet				

The following additional information is required when using client's or rented equipment, or when a UL ID Number for an instrument number is not used. The Inst. ID # below corresponds to the Inst. ID # above.

Inst. ID #	Make / Model / Serial Number / Asset No.
N/A	

CONSTRUCTION COMPLIANCE REVIEW:

The sample was reviewed for compliance with the construction requirements in the standard(s) indicated below and a complete record including measurements to support compliance with those requirements is detailed in Report Reference Number E213998-A12

Standard(s): ☒ CSA C22.2 No. 60950-1-03 1st Ed. 2003-11
☒ UL60950-1 1st Ed. 2006-07-07
☐ UL60950-1 1st Ed. 2006-07-07; CSA C22.2 No. 60950-1-03 1st Ed. 2003-11; IEC 60950-1:2001, First Edition

DATA PACKAGE INFORMATION SHEET

Applicant Info	Applicant Name / Address: <u>Winmate Communication Inc.</u> <u>9Th Fl 111-6 Hsing Te Rd Sun Chung City Taipei Hsien 241 Taiwan</u>
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Product Info	Standard: <u>UL 60950-1, 1st Edition, 2006-07-07 (Information Technology Equipment - Safety - Part 1: General Requirements) CSA C22.2 No. 60950-1-03, 1st Edition, 2006-07 (Information Technology Equipment - Safety - Part 1: General Requirements) IEC 60950-1:2001, First Edition</u> CCNs: <u>NWQG/NWQG7</u> Product <u>19" Panel PC</u> Models <u>W19B89T-XXXX</u>
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Test Location Info:	<input checked="" type="checkbox"/> CAP <input type="checkbox"/> COMPASS <input type="checkbox"/> CTD <input type="checkbox"/> TCP <input type="checkbox"/> TPTDP <input type="checkbox"/> UL <input type="checkbox"/> WTD <input type="checkbox"/> The WTD test facility had the environment and capabilities necessary to perform the tests.		
	Test Location Name/Address: <u>Universal Standard Services, Inc.</u> <u>8F-1, No. 266, Sec. 1, Wen Hua 2nd Road, Lin Kou Shiang 244, Taipei</u> <u>Country, Taiwan</u>		
	Last CIP Assessment Date: <u>2006-8-25</u>		
	<table style="width: 100%;"> <tr> <td style="width: 50%;"> CTD Reviewer: Sign <u>[Signature]</u> Print <u>Andy Cheng</u> </td> <td style="width: 50%;"> UL Witness for WTD: Sign <u>[Signature]</u> Print <u>2007-6-14</u> </td> </tr> </table>	CTD Reviewer: Sign <u>[Signature]</u> Print <u>Andy Cheng</u>	UL Witness for WTD: Sign <u>[Signature]</u> Print <u>2007-6-14</u>
CTD Reviewer: Sign <u>[Signature]</u> Print <u>Andy Cheng</u>	UL Witness for WTD: Sign <u>[Signature]</u> Print <u>2007-6-14</u>		

UL Lab Pre-Test Info	Lab Hours: _____ Lab Submittal Date: _____ Lab Due Date: _____ Responsible Engineer: Sign _____ Print _____ Ext. _____ Notes to Lab: _____
	Reviewer: Sign _____ Print _____ Ext. _____

UL Lab Info	Log Number: _____ Log In Date: _____ Log Out Date: _____ Log Out Reason: <input type="checkbox"/> Tests complete <input type="checkbox"/> Test failure <input type="checkbox"/> Need samples <input type="checkbox"/> _____ Reason for Lab Extension: _____ Lab Technician: Sign _____ Print _____ Lab Supervisor: Sign _____ Print _____
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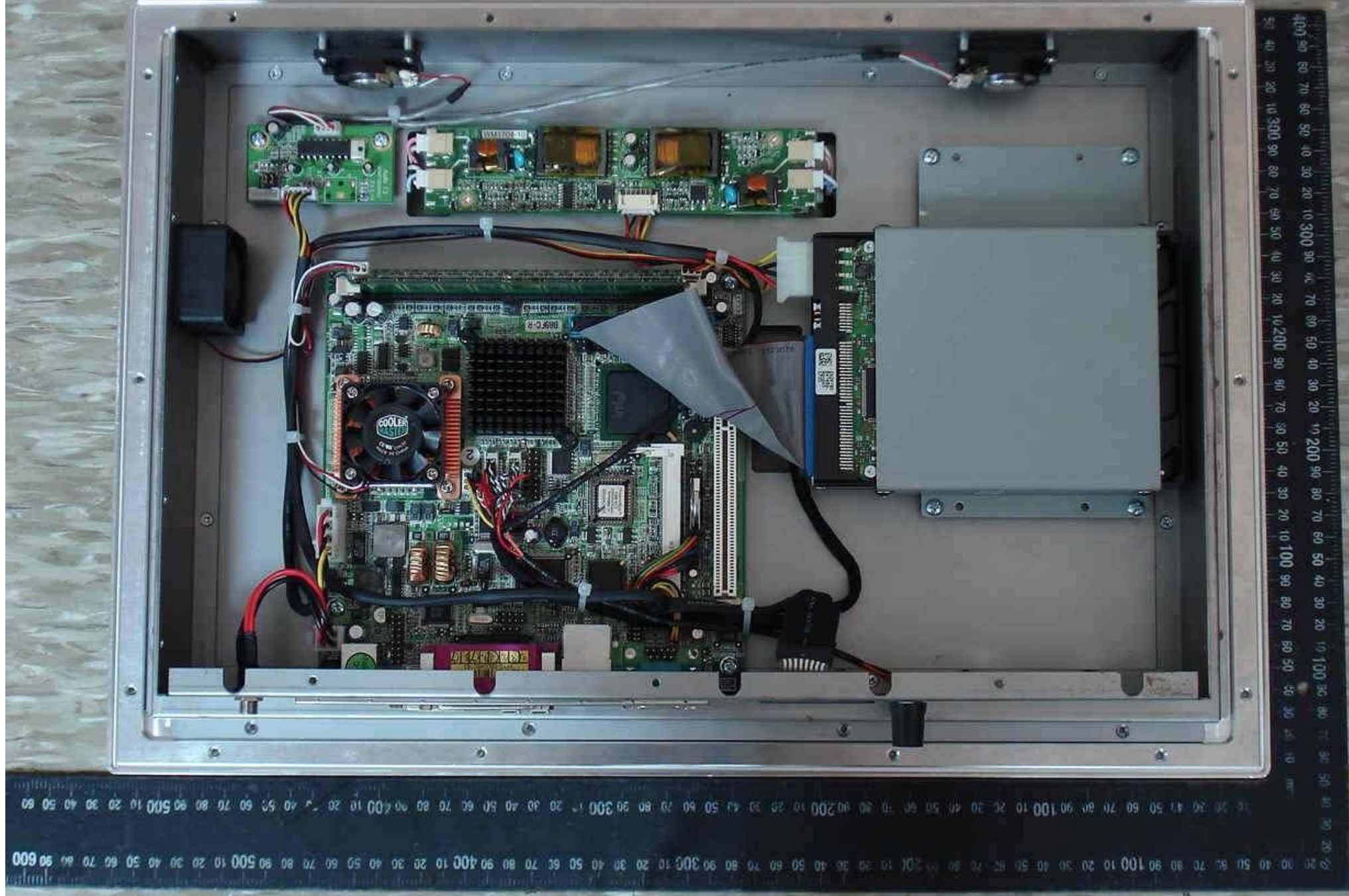
Test Data Approved By:	Responsible Engineer: Sign <u>[Signature]</u> Print <u>Kevin Hsu</u> Date <u>2007-6-14</u>	Reviewer: Sign <u>[Signature]</u> Print <u>Stephen Ho</u> Date <u>2007-7-9</u>
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Enclosure**Photographs**

Supplement Id	Description
3-01	Top view
3-02	Rear view
3-03	Internal view
3-04	Connector view
3-05	Top view of Mother Board
3-06	Bottom view of Mother Board
3-07	Top view of Inverter, Taiwan Power Conversion Inc., TI1704WM-03
3-08	Bottom view of Inverter ,Taiwan Power Conversion Inc., TI1704WM-03













0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500 510 520 530 540 550 560 570 580 590 600 610 620 630 640 650 660 670 680 690 700 710 720 730 740 750 760 770 780 790 800 810 820 830 840 850 860 870 880 890 900 910 920 930 940 950 960 970 980 990 1000

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500 510 520 530 540 550 560 570 580 590 600 610 620 630 640 650 660 670 680 690 700 710 720 730 740 750 760 770 780 790 800 810 820 830 840 850 860 870 880 890 900 910 920 930 940 950 960 970 980 990 1000



WM1704-10

CAUTION
HIGH VOLTAGE

10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

mm

10

30

40

50

60

70

80

90

40

50

100

20

30

40

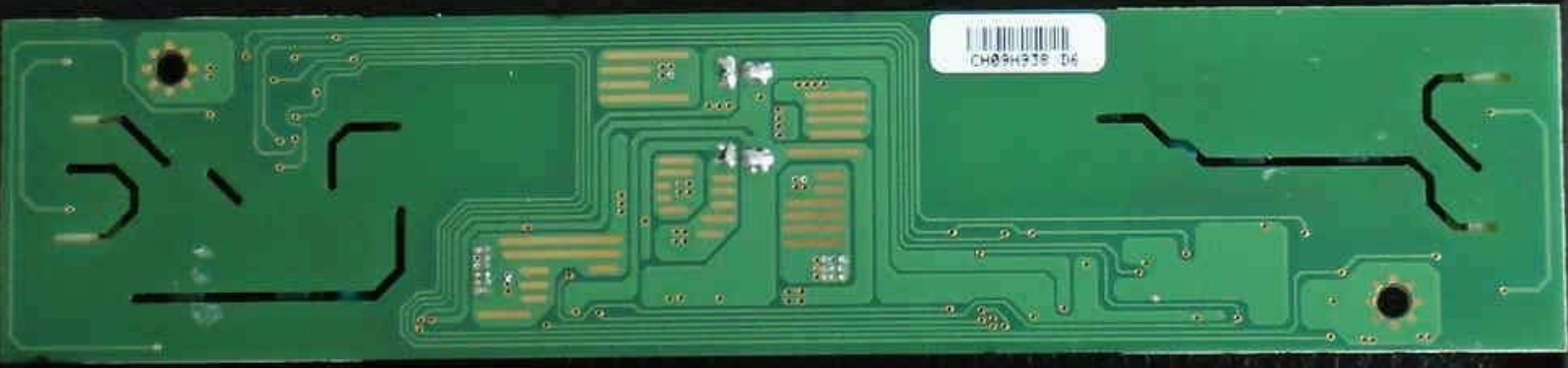
50

60

70

80

30



CH09H719 D4

Enclosure**Diagrams**

Supplement Id	Description
4-01	T1, T2 spec. for inverter (Universal Microelectronics Co., Ltd)
4-02	Alternate T1, T2 spec. for inverter (Biing Jey Enterprise Co., Ltd)
4-03	CE1, CE2 spec. for inverter(Universal Microelectronics Co., Ltd)
4-04	Alternate CE1, CE2 spec. for inverter (Biing Jey Enterprise Co., Ltd)



SPECIFICATION FOR APPROVAL

Universal Microelectronics Co., Ltd.
3,27Th Rd., Taichung Industrial Park,
Taichung, Taiwan, R.O.C.
(TEL: 886-4-23590096 FAX: 886-4-2359-0129)
<http://www.umec-web.com> E-mail: business@umec.com.tw

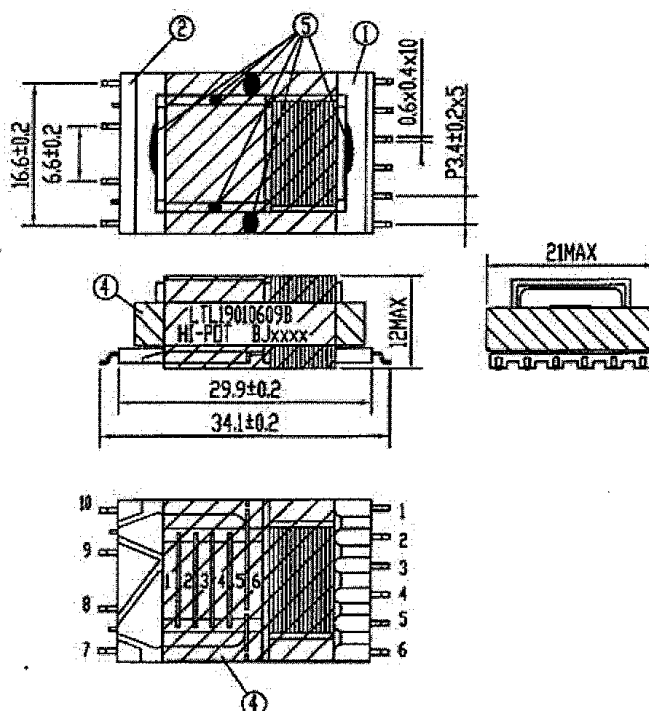
UM MODEL NO. UT35G74	TRANSFORMER		ISSUE NO. USTA-95437	
CUSTOMER: 錄運科技	CUSTOMER'S P/N: LTL19010609U	DATE: 15/SEP/2006	UM REV: A0	SHEET: 2 OF 2
<p>DIMENSION & SCHEMATIC :</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> </div> <div style="text-align: center;"> </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 20px;"> <div style="text-align: center;"> </div> <div style="text-align: center;"> </div> </div> <p style="text-align: right; margin-top: 20px;">UNIT : mm</p>				
APPROVED BY	Andy Tseng	CHECKED BY	DRAWN BY	Liao

SPECIFICATION FOR APPROVAL

CUSTOMER: 錄運科技 PART NUMBER: LTL19010609B REV: _

DESCRIPTION EEL19X'FMR DATE: 09/11/2006

A.DIMENSION: (UNIT:mm)



- NOTE: 1. COIL 刷膠固定
 2. CORE FIX BY KAPTON TAPE 2Ts(如圖④)
 3. CORE 點EPOXY 固定
 4. 外蓋點膠固定
 5. 外圍包 KAPTON TAPE 1.1Ts(如圖④)

APPROVED BY:



CHECKED BY:



PREPARED BY:



PAGE 1 OF 6

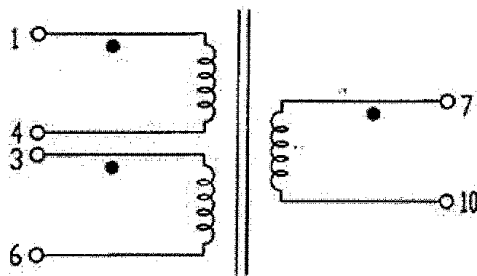
炳傑企業股份有限公司
東莞廣寶電子廠BLING JEY ENTERPRISE CO.,LTD.
DONG WAN GOANG BAO ELECTRONIC CO.,LTD.

SPECIFICATION FOR APPROVAL

CUSTOMER: 鍊運科技 PART NUMBER: LTL19010609B REV: __

DESCRIPTION EEL19X'FMR DATE: 09/11/2006

B. SCHEMATIC



WINDING SUMMARY(WINDING SPECIFICATION):

WINDING ORDER	TERMINAL NO. STAR-FISH	WINDING SPECIFICATION	REMARK
#1	P1	1-4	2UEW 0.1Φ×15 23Ts ± 0T
#2	P2	3-6	2UEW 0.1Φ×15 23Ts ± 0T
#3	S1	7-10	Pp155 0.06m/m 1500Ts

PS:P1,P2 並繞

APPROVED BY:



CHECKED BY:



PREPARED BY:



PAGE 2 OF 6

炳傑企業股份有限公司
東莞廣寶電子廠BIING JEY ENTERPRISE CO.,LTD.
DONG WAN GOANG BAO ELECTRONIC CO.,LTD.



SPECIFICATION FOR APPROVAL

Universal Microelectronics Co., Ltd.
3,27Th Rd., Taichung Industrial Park,
Taichung, Taiwan, R.O.C.
(TEL: 886-4-23590096 FAX: 886-4-2359-0129)
<http://www.umec-web.com> E-mail: business@umec.com.tw

UM MODEL NO. UT34463	COMMON MODE CHOKE		ISSUE NO. USTA-95289	
CUSTOMER: 銖運科技	CUSTOMER'S P/N: LKW9R801006U	DATE: 16/JUN./2006	UM REV: B0	SHEET: 2 OF 3

CONSTRUCTION :

SCHEMATIC :

APPROVED BY	Charles Huang	CHECKED BY	Liao	DRAWN BY	Harris
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SPECIFICATION FOR APPROVAL

Universal Microelectronics Co., Ltd.
3,27Th Rd., Taichung Industrial Park,
Taichung, Taiwan, R.O.C.
(TEL: 886-4-23590096 FAX: 886-4-2359-0129)
<http://www.umec-web.com> E-mail: business@umec.com.tw

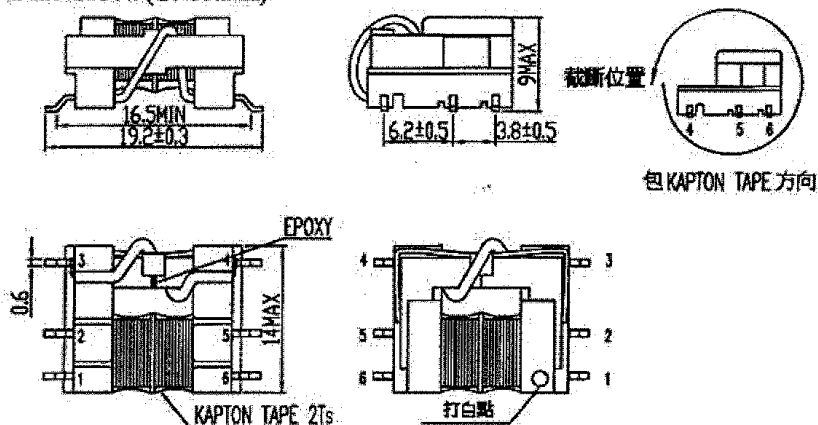
UM MODEL NO. UT34463	COMMON MODE CHOKE		ISSUE NO. USTA-95289	
CUSTOMER: 銓運科技	CUSTOMER'S P/N: LKW9R801006U	DATE: 16/JUN./2006	UM REV: B0	SHEET: 3 OF 3
<p>DIMENSIONS :</p> <p>UNIT : mm</p>				
APPROVED BY	Charles Huang	CHECKED BY	Liao	DRAWN BY Harris

SPECIFICATION FOR APPROVAL

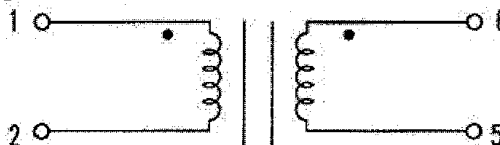
CUSTOMER: 鍊運科技 PART NUMBER: LKW9R801006B REV: _

DESCRIPTION UU8.0(臥式) LINE FILTER COIL DATE: 09/19/2006

A.DIMENSION: (UNIT:mm)



B.SCHEMATIC



C.ELECTRICAL CHARACTER:

TEST CONDITION: AT 1KHz, 0.25Vrms

RELATIVE HUMIDITY: 56±20% TEMPERATURE: 25°C

TEST METER CH-102、CH502AC

TERMINAL	WIRE	TURNS	INDUCTANCE	DC RESISTANCE
1-2	0.10φ	265Ts(REF)	88mH+20 -15% 75~105mH	13.7 Ω MAX
6-5	0.10φ	265Ts(REF)	88mH+20 -15% 75~105mH	13.7 Ω MAX
3-4	0.3φ	1Ts	-	-

PS: N(3-4) ADD TEFLON TUBE

APPROVED BY:



CHECKED BY:



PREPARED BY:

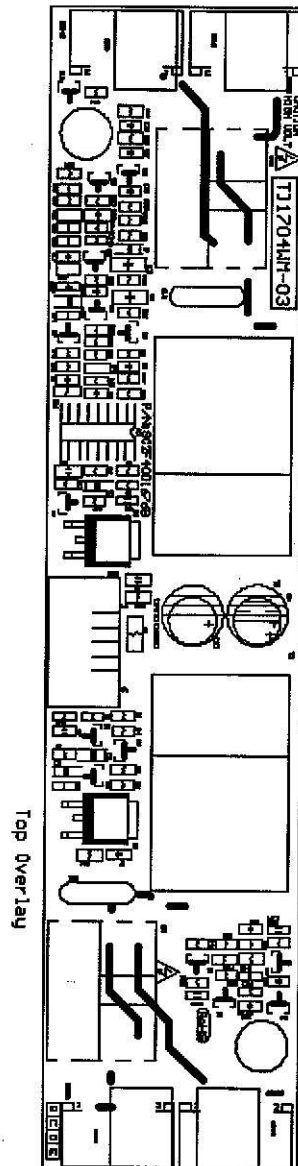


PAGE 1 OF 3

炳傑企業股份有限公司
東莞廣寶電子廠BIING JEY ENTERPRISE CO.,LTD.
DONG WAN GOANG BAO ELECTRONIC CO.,LTD.

Enclosure**Schematics + PWB**

Supplement Id	Description
5-01	PCB layout of inverter Taiwan Power Conversion Inc., TI1704WM-03



Enclosure

Manuals

Supplement Id	Description
6-01	Installation Manual

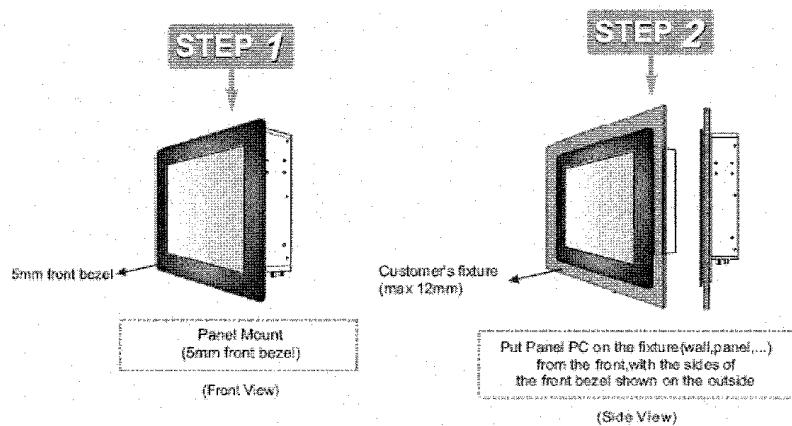
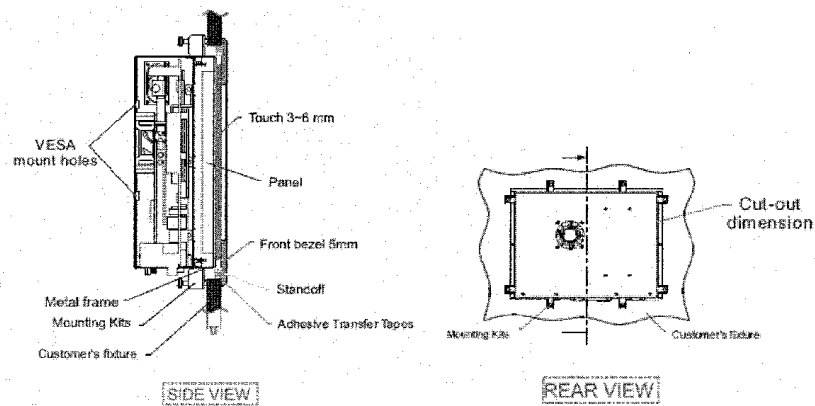
Winmate Panel PC

Mounting User's Guide

Mounting Guide

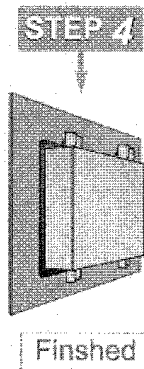
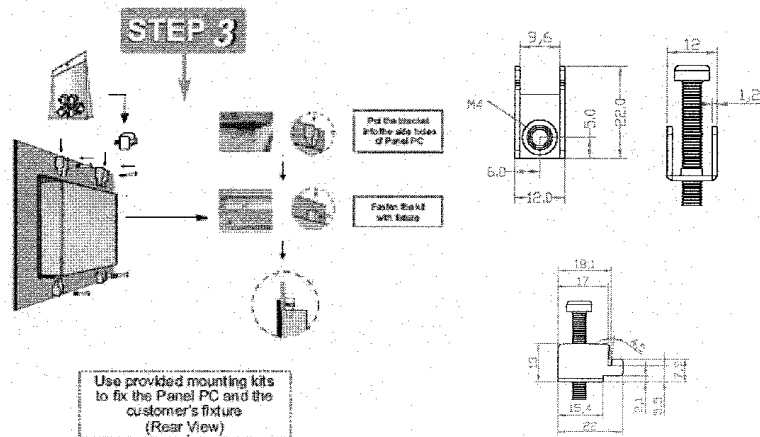
5mm Panel mount Panel PC

- Panel is aligned with the same height of the front of open frame metal housing.
- Touch/Glass is higher than Open frame metal housing.
- Customers can fix our Panel PC with their fixture(max.12mm)
- VESA mount holes are also available for mounting from back side.



Winmate Panel PC

Mounting User's Guide

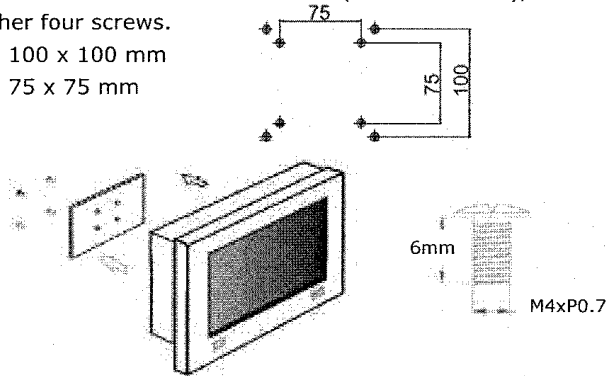


PANEL PC PM 5mm	
PANEL PC size	Mounting Kits(pcs)
6.4"	4
6.5"	4
8.4"	8
10.4"	8
12.1"	10
15"	12
17"	12
19"	14

Winmate Panel PC**Mounting User's Guide****VESA mount Panel PC**

Fix the Panel PC with four screws (standard VESA), and fasten to the wall with other four screws.

- 100 x 100 mm
- 75 x 75 mm



VESA mount Panel PC	
Panel PC size	VESA Mount Dimension
6.4"	75 x 75 mm
6.5"	75 x 75 mm
8.4"	75 x 75 mm
10.4"	75 x 75 mm
12.1"	75 x 75 mm
15"	75 x 75 mm / 100 x 100 mm
17"	75 x 75 mm / 100 x 100 mm
19"	75 x 75 mm / 100 x 100 mm

Enclosure
National Differences

USA / Canada

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict

USA / Canada - Differences to IEC 60950-1:2001, First Edition			
1.1	Equipment able to be installed in accordance with the National Electrical Code ANSI/NFPA 70 and the Canadian Electrical Code, Part1, and when applicable, the National Electrical Safety Code, IEEE C2.		Pass
1.1.1	Equipment able to be installed in accordance with ANSI/NFPA 75 and NEC Art. 645 unless intended for use outside of computer room and provided with such instructions.		Pass
1.1.2	Equipment in wire-line communication facilities serving high-voltage electric power stations operating at greater than 1kV are excluded.		N/A
1.1.2	Special requirements apply to equipment intended for use outdoors.		N/A
1.4.14	For Pluggable Equipment Type A, the protection in the installation is assumed to be 20 A.		N/A
1.5.1	All IEC standards for components identified in Annex P.1 replaced by the relevant requirements of CSA and UL component standards in Annex P.1.		Pass
1.5.1	All IEC standards for components identified in Annex P.2 alternatively satisfied by the relevant requirements of CSA and UL component standards in Annex P.2.		Pass
1.5.5	Interconnecting cables acceptable for the application regarding voltage, current, temperature, flammability, mechanical serviceability and the like.		Pass
1.5.5	For other than limited power and TNV circuits, the type of output circuit identified for output connector.		N/A
1.5.5	External cable assemblies that exceed 3.05 m in length to be types specified in the NEC and CEC.		N/A
1.5.5	Detachable external interconnecting cables 3.05 m or less in length and provided with equipment marked to identify the responsible organization and the designation for the cable.		N/A
1.5.5	Building wiring and cable for use in ducts, plenums and other air handling space subject to special requirements and excluded from scope.	There are no any Telephone line and extension cords.	N/A
1.5.5	Telephone line and extension cords and the like comply with UL 1863 and CSA C22.2 No. 233.		N/A
1.6.1.2	Equipment intended for connection to a d.c. power (mains) distribution system is subject to special		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	circuit classification requirements (e.g., TNV-2)		
1.6.1.2	Earthing of d.c. powered equipment provided.		N/A
1.7	Lamp replacement information indicated on lampholder in operator access area.		N/A
1.7.1	Special marking format for equipment intended for use on a supply system with an earthed neutral and more than one phase conductor.		N/A
1.7.1	Equipment voltage rating not higher than rating of the plug except under special conditions.		N/A
1.7.6	Special fuse replacement marking for operator accessible fuses.		N/A
1.7.7	Identification of terminal connection of the equipment earthing conductor.	Class III unit.	N/A
1.7.7	Connectors and field wiring terminals for external Class 2 or Class 3 circuits provided with marking indicating minimum Class of wiring to be used.		N/A
1.7.7	Marking located adjacent to terminals and visible during wiring.		N/A
2.1.1	Screw shell of Edison-base lampholder tied to the neutral conductor.		N/A
2.1.1.1	Bare TNV conductive parts in the interior of equipment normally protected against contact by a cover intended for occasional removal are exempt provided instructions include directions for disconnection of TNV prior to removal of the cover.	No TNV present.	N/A
2.3.1.b	Other telecommunication signaling systems (e.g., message waiting) than described in 2.3.1(b) are subject to M.4.		N/A
2.3.1.b	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vp or 60 V d.c., the maximum current limit through a 2000 Ohm or greater resistor with loads disconnected is 7.1 mA peak or 30 mA d.c. under normal conditions.		N/A
2.3.1.b	Limits for measurements across 5000 ohm resistor in the event of a single fault are replaced after 200 ms with the limits of M.3.1.4.		N/A
2.3.2	Enamel coating on signal transformer winding wire allowed as an alternative to Basic insulation in specific telecommunication applications when subjected to special construction requirements and routine testing.		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
2.3.2	In the event of a single fault, the limits of 2.2.3 apply to SELV circuits and accessible conductive parts.		N/A
2.5	Overcurrent protection device required for Class 2 and Class 3 limiting in accordance with the NEC, or for a Limited Power Source, not interchangeable with devices of higher ratings if operator replaceable.		N/A
2.6	Equipment having receptacles for output a.c. power connectors generated from an internal separately derived source have the earthed (grounded) circuit conductor suitably bonded to earth.		N/A
2.6.3.3	For Pluggable Equipment Type A, if neither a) or b) are applicable, the current rating of the circuit is taken as 20 A.		N/A
2.6.3.4	Capacity of connection between earthing terminal and parts required to be earthed subject to special conditions based on the current rating of the circuit.		N/A
2.6.3.4	Protective bonding conductors and their terminals of non-standard constructions (e.g. PWB traces) evaluated to limited short-circuit test of CSA C22.2 No.0.4.		N/A
2.6.4.1	Field wiring terminals for earthing conductors suitable for wire sizes (gauge) used in US and Canada.		N/A
2.7.1	Data for selection of special external branch circuit overcurrent devices marked on the equipment.		N/A
2.7.1	Standard supply outlets protected by overcurrent device in accordance with the NEC, and CEC, Part 1.		N/A
2.7.1	Overcurrent protection for individual transformers that distribute power to other units over branch circuit wiring.		N/A
2.7.1	Additional requirements for overcurrent protection apply to equipment provided with panelboards.		N/A
2.7.1	Non-motor-operated equipment requiring special overcurrent protective device marked with device rating.		N/A
2.10.5.4	Multi-layer winding wire subject to UL component wire requirements in addition to 2.10.5.4 and Annex U.		N/A
3.1.1	Permissible combinations of internal wiring/external cable sizes for overcurrent and short circuit		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	protection.		
3.1.1	All interconnecting cables protected against overcurrent and short circuit.		N/A
3.2	Wiring methods permit connection of equipment to primary power supply in accordance with the NEC and CEC, Part 1.		N/A
3.2.1	Permitted use for flexible cords and plugs.		N/A
3.2.1	Flexible cords provided with attachment plug rated 125% of equipment current rating.		N/A
3.2.1	Any Class II equipment provided with 15 or 20 A standard supply outlets, Edison-base lampholders or single pole disconnect device provided with a polarized type attachment plug.		N/A
3.2.1.2	Equipment intended for connection to DC mains supply power systems complies with special wiring requirements (e.g., no permanent connection to supply by flexible cord).		N/A
3.2.1.2	Equipment with one pole of the DC mains supply connected to both the equipment mains input terminal and the main protective earthing terminal provided with special instructions and construction provisions for earthing		N/A
3.2.1.2	Equipment with means for connecting supply to earthing electrode conductor has no switches or protective devices between supply connection and earthing electrode connection.		N/A
3.2.1.2	Special markings and instructions for equipment with provisions to connect earthed conductor of a DC supply circuit to earthing conductor at the equipment.		N/A
3.2.1.2	Special markings and instructions for equipment with earthed conductor of a DC supply circuit connected to the earthing conductor at the equipment.		N/A
3.2.1.2	Terminals and leads provided for permanent connection of DC powered equipment to supply marked to indicate polarity if reverse polarity may result in a hazard.		N/A
3.2.3	Permanently connected equipment has provision for connecting and securing a field wiring system (i.e. conduit, or leads etc.) per the NEC and CEC, Part 1.		N/A
3.2.3	Permanently connected equipment may have		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	terminals or leads not smaller than No. 18 AWG (0.82 mm ²) and not less than 152 mm in length for connection of field installed wiring.		
3.2.3	If supply wires exceed 60 °C, marking indicates use of 75 °C or 90 °C wiring for supply connection as appropriate.		N/A
3.2.3	Equipment compatible with suitable trade sizes of conduits and cables.		N/A
3.2.5	Length of power supply cord limited to between 1.5 and 4.5 m unless shorter length used when intended for a special installation.		N/A
3.2.5	Conductors in power supply cords sized according to NEC and CEC, Part I.		N/A
3.2.5	Power supply cords and cord sets incorporate flexible cords suitable for the particular application.		N/A
3.2.6	Strain relief provided for non-detachable interconnecting cables not supplied by a limited power source.		N/A
3.2.9	Adequate wire bending space and volume of field wiring compartment required to properly make the field connections.		N/A
3.2.9	Equipment intended solely for installation in Restricted Access Locations using low voltage d.c. systems may not need provision for connecting and securing a field wiring system. A method of securing wiring or instructions provided to ensure the wiring is protected from abuse.		N/A
3.3	Field wiring terminals provided for interconnection of units for other than LPS or Class 2 circuits also comply with 3.3.		N/A
3.3	Interconnection of units by LPS or Class 2 conductors may have field wiring connectors other than those specified in 3.3 if wiring is reliably separated.		N/A
3.3.1	Terminals for the connection of neutral conductor identified by a distinctive white marking or other equally effective means.		N/A
3.3.3	Wire binding screw terminal permitted for connection of No. 10 AWG (5.3 mm ²) or smaller conductor if provided with upturned lugs, cupped washer or equivalent retention.		N/A
3.3.4	Terminals accept wire sizes (gauge) used in the		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	U.S. and Canada.		
3.3.4	Terminals accept current-carrying conductors rated 125% of the equipment current rating.		N/A
3.3.6	Field wiring terminals marked to indicate the material(s) of the conductor appropriate for the terminals used.		N/A
3.3.6	Connection of an aluminum conductor not permitted to terminal for equipment earthing conductor.		N/A
3.3.6	Field wiring connections made through the use of suitable pressure connectors (including set screw type), solder lugs or splices to flexible leads.		N/A
3.4.2	Separate motor control device(s) required for cord-connected equipment rated more than 12 A, or with motor rated more than 1/3 hp or more than 120 V.		N/A
3.4.8	Vertically mounted disconnect devices oriented so up position of handle is "on".		N/A
3.4.11	For computer-room applications, equipment with battery systems capable of supplying 750 VA for 5 min require battery disconnect means.		N/A
4.2.8.1	Special opening restrictions for enclosures around CRTs with face dimension of 160 mm or more.	The equipment does not have any CRT.	N/A
4.2.9	Compartment housing high-pressure lamp marked to indicate risk of explosion.	The equipment does not have any high pressure lamps.	N/A
4.3.2	Loading test for equipment with handle(s) used to support more than 9 kg tested at four times the weight of the unit.		N/A
4.3.6	In addition to the IEC requirements, Direct Plug-in Equipment complies with UL 1310 or CSA 223 mechanical assembly requirements.		N/A
4.3.12	The maximum quantity of flammable liquid stored in equipment complies with ANSI/NFPA 30(Table NAE.6).	The equipment does not use any flammable liquids.	N/A
4.3.12	Equipment using replenishable liquids marked to indicate type of liquid to be used.		N/A
4.3.13.2	Equipment that produces x-radiation and does not comply with 4.3.12 under all conditions of servicing marked to indicate the presence of radiation where readily visible.		N/A
4.3.13.5	Requirements contained in the applicable national codes and regulations apply to lasers (21 CFR 1040		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	and REDR C1370).		
4.7	Automated information storage equipment intended to contain more than 0.76 m ³ of combustible media requires provision for automatic sprinklers or a gaseous agent extinguishing system.		N/A
4.7.3.1	Equipment for use in environmental air space other than ducts or plenums provided with metal enclosure or with non-metallic enclosure having adequate fire-resistance and low smoke producing characteristics. Low smoke-producing characteristics evaluated according to UL 2043. Equipment for installation in space used for environmental air as described in Sec. 300-22(c) of the NEC provided with instructions indicating suitability for installation in such locations.		N/A
4.7.3.1	Flame spread rating for external surface of combustible material with exposed area greater than 0.93 m ² or a single dimension greater than 1.8 m; 50 or less for computer room applications or 200 or less for other applications.		N/A
4.7.3.4	Wire marked "VW-1" or "FT-1" considered equivalent.	Internal wiring is UL Recognized, marked VW-1 or FT-1 and strapped by individual cable ties (where needed).	Pass
5.1.8.2	Special earthing provisions and instructions for equipment with high touch current due to telecommunication network connections.		N/A
5.1.8.3	Touch current due to ringing voltage for equipment containing telecommunication network leads.		N/A
5.3.6	Overloading of SELV connectors and printed wiring board receptacles accessible to the operator.	(See appended table 5.3)	Pass
5.3.6	Tests interrupted by opening of a component repeated two additional times.		N/A
5.3.8.1	Test interrupted by opening of wire or trace subject to certain conditions.		N/A
6	Specialized instructions provided for telephones that may be connected to a telecommunications network.	No TNV present	N/A
6	Marking identifying function of telecommunication type connectors not used for connection to a telecommunication network.		N/A
6.2.1	Special requirements for enameled wiring used as electrical separation provided between parts		N/A

IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict
	connected to telecommunication network and telecommunication circuitry intentionally isolated from network.		
6.2.1	Digital line termination equipment (e.g., NCTE) subject to separation requirements.		N/A
6.3	Equipment remotely powered over telecommunication wiring systems provided with specialized markings adjacent to the connection.		N/A
6.3	Overcurrent protection incorporated into equipment to provide power over telecommunication wiring system not interchangeable with devices of higher ratings if operator replaceable.		N/A
6.4	Additional requirements for equipment intended for connection to a telecommunication network using cable subject to overvoltage from power line failures (Fig. 6C).		N/A
6.4	Where 26 AWG line cord required by Fig. 6C, either the cord is provided with the equipment or described in the safety instructions.		N/A
6.5	Acoustic pressure from an ear piece less than 136 dBA for short duration disturbances, and less than 125 dBA for handsets, 118 dBA for headsets, and 121 dBA for insert earphones, for long duration disturbances.		N/A
7	Equipment associated with the cable distribution system may need to be subjected to applicable parts of Chapter 8 of the NEC.		N/A
H	Ionizing radiation measurements made under single fault conditions in accordance with the requirements of the Code of Federal Regulations 21 CFR 1020 and the Canadian Radiation Emitting Devices Act, REDR C1370.		N/A
M.2	Continuous ringing signals evaluated to Method A subjected to special accessibility considerations.		N/A
M.4	Special requirements for message waiting and similar telecommunications signals.		N/A
NAC	Equipment intended for use with a generic secondary protector marked with suitable instructions.		N/A
NAC	Equipment intended for use with a specific primary or secondary protector marked with suitable instructions.		N/A


IEC 60950-1			
SubClause	Difference + Test	Result - Remark	Verdict

NAF	Household/Home Office Document Shredders		N/A
NAF.1.7	Markings and instructions alert the user to key safety considerations related to use of shredders, including not intended to be used by children, avoid touching document feed opening, avoid clothes and hair entanglement, and avoid aerosol products.		N/A
NAF.2.8.3	Safety interlock cannot be inadvertently activated by the articulated accessibility probe (figure NAF.1).		N/A
NAF.3.4	Provided with an isolating switch complying with 3.4.2, including 3 mm contact gap, with appropriate markings associated with the switch.		N/A
NAF.4.4	Hazardous moving parts are not accessible to the user, as determined using the articulated accessibility probe (figure NAF.1) and the accessibility probe/wedge (figures NAF.2/NAF.3).		N/A

SPECIFIC INSPECTION CRITERIA

BA1.0	Special Instructions to UL Representative
BA1.1	N/A

BB1.0	Supporting Documentation
BB1.1	<p>The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:</p> <p>A. Authorization - The Authorization page may include additional Factory Identification Code markings.</p> <p>B. Generic Inspection Instructions -</p> <ul style="list-style-type: none"> i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report. ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report. iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

BC1.0	Markings and instructions	
BC1.1	The following markings and instructions are provided as indicated.	
BC1.2	All clause references are from UL 60950-1, 1st Edition, 2006-07-07 (Information Technology Equipment - Safety - Part 1: General Requirements).	
Standard Clause	Clause Title	Marking or Instruction Details
1.7.1	Power rating - Ratings	Ratings (voltage, frequency/dc, current)
	Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
	Power rating - Model	Model Number
1.7.8.3	Symbols - Stand-by switch	"Stand-by" to be indicated by  (60417-2-IEC-5009)
1.7.15	Replaceable batteries	"CAUTION: Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions."

BD1.0	Production-Line Testing Requirements						
BD1.1	Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.						
					Test Potential		
	Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s
	N/A						
BD1.2	Earthing Continuity Test Exemptions - This test is not required for the following models:						
BD1.3	Electric Strength Test Exemptions - This test is not required for the following models:						
BD1.4	Electric Strength Test Component Exemptions - The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test:						

BE1.0	Sample and Test Specifics for Follow-Up Tests at UL					
BE1.1	Model	Component	Material	Test	Sample(s)	Test Specifics
	N/A					

SPECIFIC TECHNICAL CRITERIA

UL 60950-1, First Edition Information technology equipment - Safety- Part 1: General Requirements	
Report Reference No	E213998-A12-UL-1
Compiled by	Kevin Hsu
Reviewed by	Stephen Ho
Date of issue	2007-07-09
Standards	UL 60950-1, 1st Edition, 2006-07-07 (Information Technology Equipment - Safety - Part 1: General Requirements) CSA C22.2 No. 60950-1-03, 1st Edition, 2006-07 (Information Technology Equipment - Safety - Part 1: General Requirements)
Test procedure	Listing
Non-standard test method	N/A
Test item description	19" Panel PC
Trademark	None
Model and/or type reference	W19B89T-XXXX (X can be 0-9, A-Z or blank)
Rating(s)	12Vdc, 9.17A

Particulars: test item vs. test requirements

Equipment mobility	movable
Operating condition	continuous
Mains supply tolerance (%)	No direct connection
Tested for IT power systems	No
IT testing, phase-phase voltage (V)	N/A
Class of equipment	Class III (supplied by SELV)
Mass of equipment (kg)	8.4 kg
Protection against ingress of water	IP X0

Possible test case verdicts:

- test case does not apply to the test object	N / A
- test object does meet the requirement	Pass
- test object does not meet the requirement	Fail (acceptable only if a corresponding, less stringent national requirement is "Pass")

General remarks:

- "(see Enclosure #)" refers to additional information appended to the Test Report
- "(see appended table)" refers to a table appended to the Test Report
- Throughout the Test Report a point is used as the decimal separator

GENERAL PRODUCT INFORMATION:	
CA1.0	Report Summary
CA1.1	N/A
CB1.0	Product Description
CB1.1	Electronic components mounted on PWB, D/A inverter and LCD panel, and includes with one HDD, two USB ports, one RS232 port, one RJ-45 port, two 1394 ports, one print port, one DVI port and two PS2 ports, housed within a metal enclosure.
CC1.0	Model Differences
CC1.1	N/A
CD1.0	Additional Information
CD1.1	N/A
CE1.0	Technical Considerations
CE1.2	The product was submitted and tested for use at the maximum ambient temperature (T _{ma}) permitted by the manufacturer's specification of: 40 °C
CE1.3	The means of connection to the mains supply is: Pluggable A or B, Detachable power cord
CE1.8	The following accessible locations (with circuit/schematic designation) are within a limited current circuit: Secondary side of D/A inverter.
CE1.9	The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): USB, 1394 port and PS/2 ports.
CE1.14	The following are available from the Applicant upon request: Installation (Safety) Instructions / Manual
CE1.15	The power supply in this equipment was: Investigated to an earlier edition/amendment of UL 60950. As part of the investigation of this product, the power supply and its test report were reviewed and found to comply with UL 60950-1.

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1	GENERAL		Pass
1.5	Components		Pass
1.5.1	General		Pass
	Comply with IEC 60950 or relevant component standard	(see appended table 1.5.1)	Pass
1.5.2	Evaluation and testing of components	Components certified to IEC harmonized standard and checked for correct application. Components not certified are used in accordance with their ratings and they comply with applicable parts of IEC 60950-1 and the relevant component Standard. Components, for which no relevant IEC-Standard exist, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 60950-1.	Pass
1.5.3	Thermal controls	There are no thermal controller used.	N/A
1.5.4	Transformers		N/A
1.5.5	Interconnecting cables	Interconnecting cables comply with the relevant requirements of this standard.	Pass
1.5.6	Capacitors in primary circuits :		N/A
1.5.7	Double insulation or reinforced insulation bridged by components		N/A
1.5.7.1	General		N/A
1.5.7.2	Bridging capacitors		N/A
1.5.7.3	Bridging resistors		N/A
1.5.7.4	Accessible parts		N/A
1.5.8	Components in equipment for IT power systems		N/A

1.6	Power interface		Pass
1.6.1	AC power distribution systems	Class III unit.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6.2	Input current	(see appended table 1.6.2) The steady state input current of the equipment did not exceed the RATED CURRENT by more than 10% under NORMAL LOAD.	Pass
1.6.3	Voltage limit of hand-held equipment	The unit is not a hand-held equipment.	N/A
1.6.4	Neutral conductor		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7	Marking and instructions		Pass
1.7.1	Power rating	Rating marking readily visible to operator.	Pass
	Rated voltage(s) or voltage range(s) (V)	12 V dc	Pass
	Symbol for nature of supply, for d.c. only	IEC 60417 No. 5031 provided on marking label.	Pass
	Rated frequency or rated frequency range (Hz).....	dc	N/A
	Rated current (mA or A).....	9.17 A	Pass
	Manufacturer's name or trademark or identification mark	WINMATE COMMUNICATION INC	Pass
	Type/model or type reference	W19B89T-XXXX (X can be 0-9, A-Z or blank)	Pass
	Symbol for Class II equipment only		N/A
	Other symbols.....	Additional symbols may be provided when submitted for National Approval.	Pass
	Certification marks	UL, C-UL.	Pass
1.7.2	Safety instructions	Safety instructions in English. Other languages will be provided when submitted for national approval.	Pass
1.7.3	Short duty cycles		N/A
1.7.4	Supply voltage adjustment.....		N/A
1.7.5	Power outlets on the equipment	No standard power outlets are provided.	N/A
1.7.6	Fuse identification	Evaluated as an element of power supply certification.	N/A
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals		N/A
1.7.7.2	Terminal for a.c. mains supply conductors		N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators	See below.	Pass
1.7.8.1	Identification, location and marking	The function of controls affecting safety is obvious regardless of language.	Pass
1.7.8.2	Colours.....	A green LED is illuminated	Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
		when the unit is operating.	
1.7.8.3	Symbols according to IEC 60417	The stand-by switch is marked with the correct symbol (60417-1-IEC-5009).	Pass
1.7.8.4	Markings using figures.....	Figures are not used for indicating different positions of controls.	N/A
1.7.9	Isolation of multiple power sources		N/A
1.7.10	IT power distribution systems		N/A
1.7.11	Thermostats and other regulating devices	No thermostats or similar regulating devices.	N/A
1.7.12	Language	Reviewed only English markings/instructions. May be provided in other languages upon request from the manufacturer.	-
1.7.13	Durability	The marking(s) withstood the required test.	Pass
1.7.14	Removable parts	No marking is located on (a) removable part(s).	Pass
1.7.15	Replaceable batteries	The required warning is in the service manual.	Pass
	Language	Only English language reviewed. May be provided in other languages upon request from the manufacturer.	-
1.7.16	Operator access with a tool	No operator access areas require the use of a tool.	Pass
1.7.17	Equipment for restricted access locations	Equipment not intended for installation in a RESTRICTED ACCESS LOCATION.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2	PROTECTION FROM HAZARDS		Pass
2.1	Protection from electric shock and energy hazards		Pass
2.1.1	Protection in operator access areas		Pass
2.1.1.1	Access to energized parts	No operator access parts are energized parts.	Pass
	Test by inspection..... :	Operator can not contact with any parts with only basic insulation to ELV or hazardous voltage.	Pass
	Test with test finger..... :	The test finger was unable to contact bare hazardous parts.	Pass
	Test with test pin..... :	The test pin was unable to contact bare hazardous parts.	Pass
	Test with test probe :	No TNV present.	N/A
2.1.1.2	Battery compartments..... :		N/A
2.1.1.3	Access to ELV wiring	Internal wiring in an ELV circuit is not user accessible.	N/A
	Working voltage (V); minimum distance (mm) through insulation :		-
2.1.1.4	Access to hazardous voltage circuit wiring	No internal wiring accessible to the user.	N/A
2.1.1.5	Energy hazards..... :	No energy hazard in operator access area.	Pass
2.1.1.6	Manual controls	The equipment does not contain any knobs, handles, levers, or the like.	N/A
2.1.1.7	Discharge of capacitors in equipment		N/A
	Time-constant (s); measured voltage (V) :		-
2.1.2	Protection in service access areas	No bare parts operating at HAZARDOUS VOLTAGES in a service access area.	N/A
2.1.3	Protection in restricted access locations		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.2	SELV circuits		Pass
2.2.1	General requirements	The unit is supplied by approved AC adapter. The SELV reliability were considered as an element of certify power adapter.	Pass
2.2.2	Voltages under normal conditions (V)	All accessible voltages are less than 42.4 Vp or 60 V dc and are classified as SELV.	Pass
2.2.3	Voltages under fault conditions (V).....		N/A
2.2.3.1	Separation by double insulation or reinforced insulation (method 1)		N/A
2.2.3.2	Separation by earthed screen (method 2)		N/A
2.2.3.3	Protection by earthing of the SELV circuit (method 3)		N/A
2.2.4	Connection of SELV circuits to other circuits.....	SELV connected to limited current circuit.	Pass

2.3	TNV circuits		N/A
2.3.1	Limits	No TNV circuit.	N/A
	Type of TNV circuits		-
2.3.2	Separation from other circuits and from accessible parts		N/A
	Insulation employed.....		-
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed.....		-
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed.....		-
2.3.5	Test for operating voltages generated externally		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.4	Limited current circuits		Pass
2.4.1	General requirements		Pass
2.4.2	Limit values	Inverter TI1704WM-03, manufactured by Taiwan Power Conversion Inc.,: Current limit value is 22.18 mA when min. measured frequency is 47.4 kHz.	Pass
	Frequency (Hz)	Inverter TI1704WM-03, manufactured by Taiwan Power Conversion Inc.,: Min. measured 47.4 kHz from CON2 pin2 to Earth at R15 short.	-
	Measured current (mA).....	Inverter TI1704WM-03, manufactured by Taiwan Power Conversion Inc.,: Max. measured 12.5 mA from CON2 pin2 to Earth when R24 short.	-
	Measured voltage (V)	1. Method Part I Inverter TI1704WM-03, manufactured by Taiwan Power Conversion Inc.,: Max. measured 25.0 Vpk from CON2 pin2 to Earth when R24 short. 2. Method Part II CON2 pin1 to pin2, normal condition, Max. measured 1180 Vpk.	-
	Measured capacitance (mF)	0.1uF, 118uF.	-
2.4.3	Connection of limited current circuits to other circuits	Limited current circuit meets the limits of 2.4.2 under normal conditions and under single component or insulation faults in interconnected circuits.	Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.5	Limited power sources		Pass
	Inherently limited output		N/A
	Impedance limited output	See Table 1.5.1 for PTC specifications. For PS2 and 1394 ports: 1. PS2: Approved PTC Current Limiters Device(F3) provided, type SMD1812P110TF, manufactured by Polytronics Technology Corp. 2. 1394: Approved PTC Current Limiters Device(F4, F5) provided, type SMD1812P260TF, manufactured by Polytronics Technology Corp.	Pass
	Overcurrent protective device limited output	For USB port: Approved Protectors, Low-Voltage Solid-State (Q11, Q47)provided, type RT9701PBL, manufactured by Richtek Technology Corp.	Pass
	Regulating network limited output under normal operating and single fault condition		N/A
	Regulating network limited output under normal operating conditions and overcurrent protective device limited output under single fault condition		N/A
	Output voltage (V), output current (A), apparent power (VA):.....:	USB1 and USB2 port: Uoc=4.99 V, Isc=1.4 max., VA=6.41 VA max. PS/2 (Mouse and Keyboard) port: Uoc=4.99 V, Isc=2.1 max., VA=8.67 VA max. 1394 (CN5 and CN8) port: Uoc=11.96V, Isc=3.3 max., VA=35.60 VA max.	-
	Current rating of overcurrent protective device (A):	protective current 2.2A	-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6	Provisions for earthing and bonding		N/A
2.6.1	Protective earthing	Class III equipment.	N/A
2.6.2	Functional earthing		N/A
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG		-
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG		-
2.6.3.4	Resistance (Ohm) of earthing conductors and their terminations, test current (A)		N/A
2.6.3.5	Colour of insulation		N/A
2.6.4	Terminals		N/A
2.6.4.1	General		N/A
2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type and nominal thread diameter (mm)		-
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance		N/A
2.6.5.7	Screws for protective bonding		N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.7	Overcurrent and earth fault protection in primary circuits		N/A
2.7.1	Basic requirements	Class III equipment.	N/A
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not covered in 5.3		N/A
2.7.3	Short-circuit backup protection		N/A
2.7.4	Number and location of protective devices..... :		N/A
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel :		N/A

2.8	Safety interlocks		N/A
2.8.1	General principles	No safety interlock used.	N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches and relays		N/A
2.8.7.1	Contact gaps (mm) :		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.9	Electrical insulation		Pass
2.9.1	Properties of insulating materials	Natural rubber, materials containing asbestos and hygroscopic materials are not used as insulation.	Pass
2.9.2	Humidity conditioning		N/A
	Humidity (%)		-
	Temperature (°C).....		-
2.9.3	Grade of insulation	Function insulation.	Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.10	Clearances, creepage distances and distances through insulation		Pass
2.10.1	General	Pollution degree 2 applicable.	Pass
2.10.2	Determination of working voltage	Class III equipment.	N/A
2.10.3	Clearances	(see appended table 2.10.3 and 2.10.4)	Pass
2.10.3.1	General	See below.	Pass
2.10.3.2	Clearances in primary circuit		N/A
2.10.3.3	Clearances in secondary circuits	(see appended table 2.10.3 and 2.10.4)	Pass
2.10.3.4	Measurement of transient voltage levels		N/A
2.10.4	Creepage distances	(see appended table 2.10.3 and 2.10.4)	Pass
	CTI tests..... :	Material group IIIb; $100 \leq \text{CTI} < 175$.	-
2.10.5	Solid insulation		N/A
2.10.5.1	Minimum distance through insulation		N/A
2.10.5.2	Thin sheet material		N/A
	Number of layers (pcs)		-
	Electric strength test		-
2.10.5.3	Printed boards	PWB is not used as reinforced or supplementary insulation.	N/A
	Distance through insulation		N/A
	Electric strength test for thin sheet insulating material		-
	Number of layers (pcs)		N/A
2.10.5.4	Wound components		N/A
	Number of layers (pcs)		N/A
	Two wires in contact inside wound component; angle between 45° and 90°		N/A
2.10.6	Coated printed boards	No special coating used.	N/A
2.10.6.1	General		N/A
2.10.6.2	Sample preparation and preliminary inspection		N/A
2.10.6.3	Thermal cycling		N/A
2.10.6.4	Thermal ageing (°C)		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.10.6.5	Electric strength test		-
2.10.6.6	Abrasion resistance test		N/A
	Electric strength test		-
2.10.7	Enclosed and sealed parts	No hermetically sealed or enclosed components used.	N/A
	Temperature $T_1=T_2 = T_{ma} - T_{amb} + 10K (^{\circ}C)$		N/A
2.10.8	Spacings filled by insulating compound.....		N/A
	Electric strength test		-
2.10.9	Component external terminations		N/A
2.10.10	Insulation with varying dimensions		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
3	WIRING, CONNECTIONS AND SUPPLY		Pass
3.1	General		Pass
3.1.1	Current rating and overcurrent protection	All internal wiring used in the distribution of primary power protected against over current were evaluated as an element of power supply certification.	Pass
3.1.2	Protection against mechanical damage	The wires are routed away from sharp edges and parts which could damage insulation.	Pass
3.1.3	Securing of internal wiring	The wires are positioned in such a manner that prevents excessive strain, loosening of terminal connections and damage of conductor insulation.	Pass
3.1.4	Insulation of conductors		N/A
3.1.5	Beads and ceramic insulators	The equipment does not have any beads or similar insulators.	N/A
3.1.6	Screws for electrical contact pressure	The equipment does not have any screw-type connections.	N/A
3.1.7	Insulating materials in electrical connections	No contact pressure through insulating material.	Pass
3.1.8	Self-tapping and spaced thread screws	Thread-cutting or space thread screws are not used for electrical connections. Machine screws only.	N/A
3.1.9	Termination of conductors		N/A
	10 N pull test		N/A
3.1.10	Sleeving on wiring	Sleeving is not used as supplementary insulation.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

3.2	Connection to an a.c. mains supply or a d.c. mains supply		N/A
3.2.1	Means of connection	No direct connection to mains.	N/A
3.2.1.1	Connection to an a.c. mains supply		N/A
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections		N/A
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter (mm) of cable and conduits..... :		-
3.2.4	Appliance inlets		N/A
3.2.5	Power supply cords		N/A
3.2.5.1	AC power supply cords		N/A
	Type..... :		-
	Rated current (A), cross-sectional area (mm ²), AWG..... :		-
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N)..... :		-
	Longitudinal displacement (mm)..... :		-
3.2.7	Protection against mechanical damage		N/A
3.2.8	Cord guards		N/A
	D (mm); test mass (g)..... :		-
	Radius of curvature of cord (mm)..... :		-
3.2.9	Supply wiring space		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

3.3	Wiring terminals for connection of external conductors		N/A
3.3.1	Wiring terminals	Class III equipment.	N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm ²)		-
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type and nominal thread diameter (mm)		-
3.3.6	Wiring terminals design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A

3.4	Disconnection from the mains supply		N/A
3.4.1	General requirement	Class III equipment.	N/A
3.4.2	Disconnect devices		N/A
3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized		N/A
3.4.5	Switches in flexible cords		N/A
3.4.6	Single-phase equipment and d.c. equipment		N/A
3.4.7	Three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		N/A
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

3.5	Interconnection of equipment		Pass
3.5.1	General requirements		Pass
3.5.2	Types of interconnection circuits	Interconnection circuits are SELV CIRCUITS.	Pass
3.5.3	ELV circuits as interconnection circuits		N/A

4	PHYSICAL REQUIREMENTS		Pass
4.1	Stability		N/A
	Angle of 10°		N/A
	Test: force (N)		N/A

4.2	Mechanical strength		Pass
4.2.1	General	Class III equipment.	N/A
4.2.2	Steady force test, 10 N		N/A
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N		N/A
4.2.5	Impact test		N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test		N/A
4.2.7	Stress relief test		N/A
4.2.8	Cathode ray tubes	The equipment does not have any CRT.	N/A
	Picture tube separately certified		N/A
4.2.9	High pressure lamps	The equipment does not have any high pressure lamps.	N/A
4.2.10	Wall or ceiling mounted equipment; force (N)	Mounting means withstands four times unit weight.	Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.3	Design and construction		Pass
4.3.1	Edges and corners	All edges and corners are judged to be sufficiently well rounded so as not to constitute a hazard.	Pass
4.3.2	Handles and manual controls; force (N)		N/A
4.3.3	Adjustable controls	The equipment does not have a voltage selector	N/A
4.3.4	Securing of parts	Electrical and mechanical connections can be expected to withstand usual mechanical stress.	Pass
4.3.5	Connection of plugs and sockets	The equipment does not have any interchangeable plugs/sockets.	N/A
4.3.6	Direct plug-in equipment	Not direct plug-in equipment.	N/A
	Dimensions (mm) of mains plug for direct plug-in ..	Not direct plug-in unit.	N/A
	Torque and pull test of mains plug for direct plug-in; torque (Nm); pull (N)		N/A
4.3.7	Heating elements in earthed equipment	The equipment does not have any heating elements.	N/A
4.3.8	Batteries	Measured Reverse Current: please see table 5.3 for detail.	Pass
4.3.9	Oil and grease	The insulation of the internal wiring is not exposed to oil, grease, etc.	N/A
4.3.10	Dust, powders, liquids and gases	The equipment does not produce dust or employ powders, liquids or gases.	N/A
4.3.11	Containers for liquids or gases	The equipment does not contain liquids.	N/A
4.3.12	Flammable liquids	The equipment does not use any flammable liquids.	N/A
	Quantity of liquid (l)		N/A
	Flash point (°C)		N/A
4.3.13	Radiation; type of radiation	The equipment does not generate ionizing radiation or contain flammable liquids or gases.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

4.3.13.1	General		N/A
4.3.13.2	Ionizing radiation		N/A
	Measured radiation (pA/kg)		-
	Measured high-voltage (kV).....		-
	Measured focus voltage (kV)		-
	CRT markings		-
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		N/A
	Part, property, retention after test, flammability classification		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation.....		N/A
4.3.13.5	Laser (including LEDs)		N/A
	Laser class.....		-
4.3.13.6	Other types		N/A

4.4	Protection against hazardous moving parts		N/A
4.4.1	General		N/A
4.4.2	Protection in operator access areas		N/A
4.4.3	Protection in restricted access locations		N/A
4.4.4	Protection in service access areas		N/A

4.5	Thermal requirements		Pass
4.5.1	Maximum temperatures	The equipment and its component parts did not attain excessive temperatures during normal operation.	Pass
	Normal load condition per Annex L	Operated in the most unfavorable way of operation given in the operating instructions until steady conditions established. (see appended table 4.5)	Pass
4.5.2	Resistance to abnormal heat		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.6	Openings in enclosures		Pass
4.6.1	Top and side openings	Openings do not exceed 5 mm in any dimension.	Pass
	Dimensions (mm)..... :	1.Topside (Two opening area): Cover area is 15.6 by 27.4 mm max., each circle opening is 3.4 mm max. 2.Rear side: Cover area is 60.65 by 60.65 mm max., each circle opening is 4.2 mm max. 3. Opening for DC Fan: Cover area is 39 by 39 mm max., each slot opening is 4.05 by 12.3 mm max. 4. Mounting Holes: See Manuals 6-01 for details.	-
4.6.2	Bottoms of fire enclosures	No openings.	Pass
	Construction of the bottom..... :	See 4.6.1 for details.	-
4.6.3	Doors or covers in fire enclosures	The equipment does not have any doors or covers.	N/A
4.6.4	Openings in transportable equipment	Unit not transportable.	N/A
4.6.5	Adhesives for constructional purposes	Adhesives not used for securement of internal barriers or screens.	N/A
	Conditioning temperature (°C)/time (weeks) :		-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

4.7	Resistance to fire		Pass
4.7.1	Reducing the risk of ignition and spread of flame	Method 1: Selection and application of components and materials which minimize the possibility of ignition and spread of flame.	Pass
	Method 1, selection and application of components wiring and materials		Pass
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure		Pass
4.7.2.1	Parts requiring a fire enclosure	A fire enclosure covers all parts.	Pass
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		Pass
4.7.3.1	General	See below.	Pass
4.7.3.2	Materials for fire enclosures	The fire enclosure is metal.	Pass
4.7.3.3	Materials for components and other parts outside fire enclosures	Connectors are made of materials of Class V-2 minimum.	Pass
4.7.3.4	Materials for components and other parts inside fire enclosures	PWBs are rated min. V-1. All internal materials are rated V-2 or better or are mounted on a PWB rated V-1 or better Internal wiring is UL Recognized, marked VW-1 or FT-1 and strapped by individual cable ties (where needed). See Table 1.5.1 for material information.	Pass
4.7.3.5	Materials for air filter assemblies	The equipment does not have any air filters.	N/A
4.7.3.6	Materials used in high-voltage components	No high-voltage components.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		Pass
5.1	Touch current and protective conductor current		N/A
5.1.1	General		N/A
5.1.2	Equipment under test (EUT)		N/A
5.1.3	Test circuit		N/A
5.1.4	Application of measuring instrument		N/A
5.1.5	Test procedure		N/A
5.1.6	Test measurements		N/A
	Test voltage (V)		-
	Measured touch current (mA)		-
	Max. allowed touch current (mA)		-
	Measured protective conductor current (mA)		-
	Max. allowed protective conductor current (mA) ...		-
5.1.7	Equipment with touch current exceeding 3.5 mA ..		N/A
5.1.8	Touch currents to and from telecommunication networks and cable distribution systems and from telecommunication networks		N/A
5.1.8.1	Limitation of the touch current to a telecommunication network and a cable distribution system		N/A
	Test voltage (V)		-
	Measured touch current (mA)		-
	Max. allowed touch current (mA)		-
5.1.8.2	Summation of touch currents from telecommunication networks		N/A

5.2	Electric strength		N/A
5.2.1	General	Class III unit.	N/A
5.2.2	Test procedure		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.3	Abnormal operating and fault conditions		Pass
5.3.1	Protection against overload and abnormal operation	See below.	Pass
5.3.2	Motors		N/A
5.3.3	Transformers	Evaluated as part of power supply.	N/A
5.3.4	Functional insulation..... :	Functional insulation complies with the requirements (a), (b), or (c).	Pass
5.3.5	Electromechanical components	The equipment does not have any electromechanical components in the secondary.	N/A
5.3.6	Simulation of faults	(See appended table 5.3)	Pass
5.3.7	Unattended equipment	Equipment is not intended for unattended use.	N/A
5.3.8	Compliance criteria for abnormal operating and fault conditions	No fire, emission of molten metal or deformation was noted during the tests.	Pass

6	CONNECTION TO TELECOMMUNICATION NETWORKS		N/A
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements		N/A
	Test voltage (V)		-
	Current in the test circuit (mA)		-
6.1.2.2	Exclusions..... :		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

6.2	Protection of equipment users from overvoltages on telecommunication networks		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		N/A

6.3	Protection of the telecommunication wiring system from overheating		N/A
	Max. output current (A)		-
	Current limiting method.....		-

7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS		N/A
7.1	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.2	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.3	Insulation between primary circuits and cable distribution systems		N/A
7.3.1	General		N/A
7.3.2	Voltage surge test		N/A
7.3.3	Impulse test		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

A	Annex A, TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N/A
A.1.1	Samples..... :		-
	Wall thickness (mm) :		-
A.1.2	Conditioning of samples; temperature (°C) :		N/A
A.1.3	Mounting of samples..... :		N/A
A.1.4	Test flame		N/A
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s)..... :		-
	Sample 2 burning time (s)..... :		-
	Sample 3 burning time (s)..... :		-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		N/A
A.2.1	Samples, material		-
	Wall thickness (mm)		-
A.2.2	Conditioning of samples		N/A
A.2.3	Mounting of samples		N/A
A.2.4	Test flame		N/A
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s).....		-
	Sample 2 burning time (s).....		-
	Sample 3 burning time (s).....		-
A.2.7	Alternative test acc. to IEC 60695-2-2, cl. 4, 8		N/A
	Sample 1 burning time (s).....		-
	Sample 2 burning time (s).....		-
	Sample 3 burning time (s).....		-

A.3	Hot flaming oil test (see 4.6.2)		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

B	Annex B, MOTOR TESTS UNDER ABNORMAL CONDITIONS(see 4.7.2.2 and 5.3.2)		N/A
B.1	General requirements		N/A
	Position		-
	Manufacturer		-
	Type		-
	Rated values		-
B.2	Test conditions		N/A
B.3	Maximum temperatures		N/A
B.4	Running overload test		N/A
B.5	Locked-rotor overload test		N/A
	Test duration (days)		-
	Electric strength test: test voltage (V)		-
B.6	Running overload test for d.c. motors in secondary circuits		N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
B.7.1	Test procedure		N/A
B.7.2	Alternative test procedure; test time (h)		N/A
B.7.3	Electric strength test		N/A
B.8	Test for motors with capacitors		N/A
B.9	Test for three-phase motors		N/A
B.10	Test for series motors		N/A
	Operating voltage (V)		-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

C	Annex C, TRANSFORMERS (see 1.5.4 and 5.3.3)		N/A
	Position		-
	Manufacturer		-
	Type		-
	Rated values		-
	Method of protection		-
C.1	Overload test		N/A
C.2	Insulation		N/A
	Protection from displacement of windings		N/A

D	Annex D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS		N/A
D.1	Measuring instrument		N/A
D.2	Alternative measuring instrument		N/A

E	Annex E, TEMPERATURE RISE OF A WINDING		N/A
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F	Annex F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10)		Pass
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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

G	Annex G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N/A
G.1	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply		N/A
G.2.2	DC mains supply		N/A
G.3	Determination of telecommunication network transient voltage (V) :..... :		N/A
G.4	Determination of required withstand voltage (V) ... :		N/A
G.5	Measurement of transient levels (V)..... :		N/A
G.6	Determination of minimum clearances :		N/A

H	ANNEX H, IONIZING RADIATION (see 4.3.13)		N/A
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J	Annex J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		N/A
	Metal used :		-

K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.7)		N/A
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V) :		N/A
K.3	Thermostat endurance test; operating voltage (V) :		N/A
K.4	Temperature limiter endurance; operating voltage (V) :		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

L	Annex L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.1)		Pass
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment		Pass

M	Annex M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		N/A
M.1	Introduction		N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	Ringing signal		N/A
M.3.1.1	Frequency (Hz)		-
M.3.1.2	Voltage (V)		-
M.3.1.3	Cadence; time (s), voltage (V)		-
M.3.1.4	Single fault current (mA)		-
M.3.2	Tripping device and monitoring voltage		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V)		N/A

N	Annex N, IMPULSE TEST GENERATORS (see 2.10.3.4, 6.2.2.1, 7.3.2 and clause G.5)		N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

P	Annex P, NORMATIVE REFERENCES		Pass
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Q	Annex Q, BIBLIOGRAPHY		Pass
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R	Annex R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A

S	Annex S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A

T	Annex T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		N/A
:		-

U	Annex U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		N/A
:		-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: list of critical components					Pass
Object/part No.	Manufacturer/ trademark	type/model	technical data	Product Category CCN(s)	Required Marks of Conformity	Supplement ID
01. Switching adapter	Li-Shin International Enterprise Corp.	0227B12110	I/p:100-240V, 2.0A, 50-60Hz O/p:12V, 9.17A,	QQGQ	UL	
02. Interconnecting Cable (optional)	Various	Various	Min. 80 degree C, 30V, max 3.05 m long, jacketed, VW-1 or FT-1	AVLV2	UL	
03. Label	Various	Various	Min. 50 degree C, if maximum surface temperature not specified.	PGDQ2 or PGJ12	UL	
04. Wiring, internal secondary ELV/SELV circuits	Various	Various	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1, jacketed, min 30V, 80 degree C	AVLV2	UL	3-03
05. Connectors and Receptacles (secondary ELV/SELV circuits)	--	--	Copper alloy pins housed in bodies of plastic rated V-2 min.	QMFZ2, ECBT2, RTRT2, DUXR2	UL	
06. Insulating Tubing/Sleeving	Various	Various	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1; 105 degree C, 300V.	UZFT2, YDPU2, YDTU2	UL	3-03
07. Enclosure	--	--	Metal min. thickness 0.95 mm min. Total overall 480 by 330 by 91 mm max.	--	--	3-01
08.LCD Panel	Various	Various	19", TFT Type	--	--	3-01
09. Speaker (x2)	--	--	8 ohm, 3.0W max.	--	--	3-03
10. DC Fan (for system)	Evercool Thermal Co., Ltd	EC4020L12BA	12Vdc, 0.06A max., 4.97 CFM min.	GPWV2	UL	
10-01. DC Fan (for CPU)	Minebea-Matsushita Motor Corp	1604KL-04W-B49	12Vdc, 0.10A max., 4.95 CFM min.	GPWV2	UL	
11. HDD	Various	Various	5V/12V, 1.5A/2.0A max.	NWQG2	UL	
12. D/A Inverter	Taiwan Power	TI1704WM-03	I/P: 13.2Vdc max., 2.5A; O/P:	--	--	3-07

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

	Conversion Inc.		760Vrms max., 8.0mArms max.			
12-A. Transformer (T1, T2)	Universal Microelectronics Co., Ltd	LKW9R801006U	105 degree C	--	--	4-01
12-A-01. Core for D/A Inverter Transformer	--	--	Ferrite, Overall 27.7 by 20 by 7.85 mm	--	--	
12-A-02. Bobbin for D/A Inverter Transformer	Various	Various	Liquid Crystal Polymer (L.C.P.), rated V-2 min., min. thickness 0.3 mm or Phenolic, min. 0.71 mm	QMFZ2	UL	
12-A-03. Wire for D/A Inverter Transformer	Various	Various	Copper magnet wire, 180 degree C min.	OBMW2	UL	
12-B. Transformer (T1, T2) (alternate)	Biing Jey Enterprise Co., Ltd	LTL19010609B	105 degree C	--	--	4-02
12-B-01. Core for D/A Inverter Transformer	--	--	Ferrite, Overall 27.7 by 20 by 7.85 mm	--	--	
12-B-02. Bobbin for D/A Inverter Transformer	Various	Various	Liquid Crystal Polymer (L.C.P.), rated V-2 min., min. thickness 0.3 mm or Phenolic, min. 0.71 mm	QMFZ2	UL/CUL	
12-B-03. Wire for D/A Inverter Transformer	Various	Various	Copper magnet wire, 105 degree C min.	OBMW2	UL	
12-C Transformer (CE1, CE2)	Universal Microelectronics Co., Ltd	LTL19010609U	105 degreeC	--	--	4-03
12-C-01. Core for D/A Inverter Transformer	--	--	Ferrite, Overall 16.96 by 13 by 6.47 mm	--	--	
12-C-02. Bobbin for D/A Inverter Transformer	Various	Various	Liquid Crystal Polymer (L.C.P.), rated V-2 min., min. thickness 0.3 mm or Phenolic, min. 0.71 mm	QMFZ2	UL	
12-C-03. Wire for D/A Inverter Transformer	Various	Various	Copper magnet wire, 105 degree C min.	OBMW2	UL	
12-D Transformer (CE1,	Biing Jey Enterprise	LKW9R801006B	105 degree C	--	--	4-04

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

CE2)(Alternate)	Co., Ltd					
12-D-01. Core for D/A Inverter Transformer	--	--	Ferrite, Overall 16.96 by 13 by 6.47 mm	--	--	
12-D-02. Bobbin for D/A Inverter Transformer	Various	Various	Liquid Crystal Polymer (L.C.P.), rated V-2 min., min. thickness 0.3 mm or Phenolic, min. 0.71 mm	QMFZ2	UL	
12-D-03. Wire for D/A Inverter Transformer	Various	Various	Copper magnet wire, 105 degree C min.	OBMW2	UL	
13. Capacity (C15, C17)	Various	Various	10pF, 3KV	--	--	
14. Mother board	iBase Technology Inc.	MB890	--	--	--	3-05
14-01. RTC Battery	Sony Energy Devices Corporation	CR2032	3V, 220mAh max. abnormal charging current 12mA	BBCV2	UL	
14-02. USB Protective Device (Q47, Q11)	Richtek Technology Corp.	RT9701PBL	2.2-6 Vdc, 2.2A.	QVGS2	UL	
14-03. PTC Polyswitch for PS/2 ports use (F3)	Polytronics Technology Corp.	SMD1812P110TF	8V, Ih=1.1A It=2.2, CA=3	XGPU2	UL	
14-04. PTC Polyswitch for 1394 ports use (F4, F5)	Polytronics Technology Corp.	SMD1812P260TF	8V, Ih=2.6A It=5.2, CA=3	XGPU2	UL	
15.All PWBs	Various	Various	V-1 min. 105 degree C	ZPMV2	UL	3-03

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	TABLE: electrical data (in normal conditions)					Pass
fuse #	I rated (A)	U (V)	P (W)	I (mA)	I fuse (mA)	condition/status
--	9.17	12Vdc	65.76	5480	--	Maximum normal load
supplementary information:						
Maximum normal load was defined as follows: Reading and writing in HDD, playing music, and each USB ports loaded 2.5W with Max. contrast and brightness, display normally.						

2.10.3 and 2.10.4	TABLE: clearance and creepage distance measurements						Pass
clearance cl and creepage distance dcr at/of:		Up (V)	U r.m.s. (V)	required cl (mm)	cl (mm)	required dcr (mm)	dcr (mm)
--		--	--	--	--	--	--
supplementary information:							
All circuits are SELV, only functional insulation required.							

2.10.5	TABLE: distance through insulation measurements				N/A
distance through insulation di at/of:		Up (V)	test voltage (V)	required di (mm)	di (mm)
supplementary information:					

4.5	TABLE: temperature rise measurements						Pass
	test voltage (V)	See below	--	--	--	--	—
	t1 (°C).....	--	--	--	--	--	—
	t2 (°C).....	--	--	--	--	--	—
maximum temperature T of part/at:		T (°C)					allowed Tmax (°C)
19" Panel PC model: W19B89T-XXXX Adapter Model: LI SHIN/0227B12110		--	--	--	--	--	--
Normal Condition		Condition 1 (Original)	Condition 1 (Shift to 40)	--	--	--	--

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.Ambient	23.8	40.0	--	--	--	--
2.T1 coil	70.6	86.8	--	--	--	105
3.CE1 coil	52.1	68.3	--	--	--	105
4.PWB near CPU	48.0	64.2	--	--	--	105
5.RTC Body	44.7	60.9	--	--	--	100
6.CPU fan	38.2	54.4	--	--	--	105
7.System fan	41.7	57.9	--	--	--	105
7.HDD body	48.9	65.1	--	--	--	--
8.Enclosure outside near CPU	33.5	49.7	--	--	--	70
temperature T of winding:		$R_1 (\Omega)$	$R_2 (\Omega)$	T (°C)	allowed Tmax (°C)	insulation class
--		--	--	--	--	--
supplementary information:						
The temperatures were measured under worst case normal mode defined in 1.2.2.1 and as described in 1.6.1 at voltages as described in 1.4.5.						
With a specified ambient temperature of 40 degree C, the max. temperature is calculated as follows: Components with: - max. absolute temp. of 100 degree C (RTC) Tmax(degree C) = 100 degree C - max. absolute temp. of 105 degree C (PWB, CE1, T1) Tmax(degree C) = 105 degree C - when no class of insulation is given, min. insulation 105 degree C assumed.						
User accessible area: - material is Metal (70 degree C) Tmax(degree C)= 70 degree C						

4.5.2	TABLE: ball pressure test of thermoplastics			N/A
	allowed impression diameter (mm) :			—
part		test temperature (°C)	impression diameter (mm)	
supplementary information:				

4.7	TABLE: resistance to fire				Pass
part		manufacturer of material	type of material	thickness(mm)	flammability class
--		--	--	--	--
supplementary information:					
Please see Table 1.5.1					

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

5.2	TABLE: electric strength tests, impulse tests and voltage surge tests		N/A
test voltage applied between:		test voltage (V) a.c./d.c.	breakdown Yes / No
supplementary information:			

5.3	TABLE: fault condition tests					Pass
	ambient temperature (°C) :				See below	—
	model/type of power supply :				--	—
	manufacturer of power supply :				--	—
	rated markings of power supply :				--	—
component No.	fault	test voltage (V)	test time	fuse No.	fuse current (A)	result
--	--	--	--	--	--	4.3.8 Lithium battery reverse current measurement test
--	--	--	--	--	--	19" Panel PC model: W19B89T-XXXX Motherboard model: iBase Technology Inc./MB890
RTC battery reverse current test	Normal	12Vdc	--	--	--	Charging current is 0.1mA
RTC battery reverse current test D10 (1-2)	Short	12Vdc	--	--	--	Charging current is 3.3mA
RTC battery reverse current test D10 (2-3)	Short	12Vdc	--	--	--	Charging current is 2.9mA
RTC battery reverse current test R273	Short	12Vdc	--	--	--	Charging current is 0.1mA
--	--	--	--	--	--	5.3.1-5.3.8.2 ABNORMAL

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
--	--	--	--	--	--	OPERATION TESTS
						19" Panel PC model: W19B89T-XXXX Adapter model: LI SHIN/0225B12110
System fan	Blocked	12Vdc	2hrs. 29mins.	--	5.48	NT,NC,CT. Normal operation. No hazardous. Maximum Temp: T1 coil=96.4 *C Ambient=40.0*C.
CPU fan	Stalled	12Vdc	2hrs 21mins.	--	5.48	NT, NC, CT, Normal operation. No hazardous. Maximum Temp: T1 coil=90.7 *C Ambient=40.0*C.
Ventilation openings	Blocked	12Vdc	1hrs. 44mins.	--	5.48	NT, NC, CT. Normal operation. No hazardous. Maximum Temp: T1 coil=98.2 *C Ambient=40.0*C.
--	--	--	--	--	--	5.3.6 Overload of operator accessible connector test:
--	--	--	--	--	--	19" Panel PC model: W19B89T-XXXX Motherboard model: iBase Technology Inc./MB890
USB1 (CN6) Pin1	Overload	12Vdc	1hrs	--	--	NB, NC, NT Open circuit voltage=4.99Vdc Maximum available current =1100mA
USB1 (CN6) pin2~4	Overload	12Vdc	--	--	--	C Open circuit voltage=0Vdc Maximum available current =0mA
USB2 (CN6) pin5	Overload	12Vdc	1hrs	--	--	NB, NC, NT Open circuit voltage=4.99Vdc Maximum available current =1100mA
USB2(CN6) pin6~8	Overload	12Vdc	--	--	--	C Open circuit voltage=0Vdc Maximum available current =0mA
1394 port(CN5) pin1	Overload	12Vdc	1hrs	--	--	NB,NC,NT Open circuit voltage=11.96Vdc Maximum available current

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
						=3000mA
1394 port (CN5) Pin2~6	Overload	12Vdc	--	--	--	C Open circuit voltage=0Vdc Maximum available current =0mA
1394 port (CN8) Pin1	Overload	12Vdc	1hrs	--	--	NB, NC, NT Open circuit voltage=11.96Vdc Maximum available current =3000mA
1394 port (CN8) Pin2~6	Overload	12Vdc	--	--	--	C Open circuit voltage=0Vdc Maximum available current =0mA
PS2(Mouse) pin4	Overload	12Vdc	1hrs	--	--	NB, NC, NT Open circuit voltage=4.99Vdc Maximum available current =1800mA
PS2(Mouse) pin1,5	Overload	12Vdc	1sec	--	--	B Open circuit voltage=4.89Vdc Maximum available current =0mA
PS2(Mouse) pin2,3,6	Overload	12Vdc	--	--	--	C Open circuit voltage=0Vdc Maximum available current =0mA
PS2(Keyboard) pin10	Overload	12Vdc	1hrs	--	--	NB, NC, NT Open circuit voltage=4.99Vdc Maximum available current =1800mA
PS2(Keyboard) pin7,11	Overload	12Vdc	1sec	--	--	B Open circuit voltage=4.89Vdc Maximum available current =0mA
PS2(Keyboard) pin8,9,12	Overload	12Vdc	--	--	--	C Open circuit voltage=0Vdc Maximum available current =0mA
RJ45 pin1~8	Overload	12Vdc	--	--	--	C Open circuit voltage=0Vdc Maximum available current =0mA
RS232 pin1~9	Overload	12Vdc	--	--	--	C Open circuit voltage=0Vdc

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
						Maximum available current =0mA
DVI pin1.2.4.5.7 .8.12.13.20 .21.23.24	Overload	12Vdc	1sec	--	--	B Open circuit voltage=1.21Vdc Maximum available current =0mA
DVI pin11.17.18 .19	Overload	12Vdc	1sec	--	--	B Open circuit voltage=5.01Vdc Maximum available current =0mA
DVI pin3.6.9.10. 14.15.16.2 2	Overload	12Vdc	--	--	--	C Open circuit voltage=0Vdc Maximum available current =0mA
Print port pin1~4,24	Overload	12Vdc	1sec	--	--	B Open circuit voltage=4.64Vdc Maximum available current =0mA
Print port pin12,13,22 ,23,25	Overload	12Vdc	1sec	--	--	B Open circuit voltage=3.39Vdc Maximum available current =0mA
supplementary information:						
Comments Key: (COMPONENT FAILURE TEST; ABNORMAL OPERATION TEST; TRANSFORMER ABNORMAL OPERATION TEST) IP - Internal protection operated (list component), CT - Constant temperatures were obtained, CD - Components damaged (list damaged components), NB - No indication of dielectric breakdown, NT - Tissue paper remained intact, NC - Cheesecloth remained intact, (OVERLOAD OF OPERATOR ACCESSIBLE CONNECTOR TEST) B - Circuit measures less than 12.5 mA, C - Circuit measures 0 Volts,						